280-P-004

127-M-001

127-M-001A

127-M-013

127-M-014

127-M-015

127-M-016

127-M-017

127-M-018

271-M-011

141-P-013

142-P-007

ROUGHER 1 CELL 8
332-FT-1008
332-PR-PID-1004
600-ALP-SC4-016

PROCESS WATER
332-PR-PID-2003

FLOTATION AIR
332-PR-PID-2003

VENDOR PACKAGE
REFER TO VENDOR P&ID
1824-V0015-PR-PID-0002

ROUGHER 2 CELL 5 AND 6
COLLECTOR PUMP
389-PP-9314
332-PR-PID-2003
20-RCL-PE3-143
SP-335
SP-928
NOTE 8
NOTE 9

ROUGHER 2 CELL 5
332-FT-2005
332-PR-PID-2003
300-SPP-SC1-473
TO GRADE
DN50 40BA1-03030

ROUGHER 2 CELL 5
332-FT-2005
332-PR-PID-2003

ROUGHER 2 CELL 5
332-FT-2005
332-PR-PID-2003

GLAND WATER
332-PR-PID-9022
25-WGS-SC1-153

PROCESS WATER
332-PR-PID-9025
200-WPA-SC1-1274

332-FA-2006
332-FT-2006
332-FT-2007
332-FA-2007
332-FA-2008
332-FT-2008
332-LA-2006
332-LA-2007
332-LA-2008
332-LA-2009

600-ALP-SC4-019
600BF3-03040

NOTE 3

DN80 DN80 DN80
DN150 DN150
300-SPP-SC1-1175
DN50 40BA1-04665
TO GRADE

DN150 DN150
300-SPP-SC1-1305
DN50 40BA1-04820
TO GRADE

3500x1050
40BA1-03031
300KG10
NOTE 4
YV 2016
DETAIL YV1

ROUGHER 3 CELL 8
332-FT-3008
600-ALP-SC4-016
332-PR-PID-3004

DN80 VENT
80-SPP-SC1-437
200-SPP-SL1-437
NOTE 5
SL1 SC1

DN100 VENT
DN300
NOTE 5 1050-SPP-SL1-411
ROUGHER 2 TAILS SAMPLER FEED BOX
332-BX-2032
332-PR-PID-9011

40BA1-03032
DN50
SP-110
300-SPP-SL1-573
(100KG10)
300x200
332-PP-2001
200x150
40BA1-03033
DN50

SC1 SL1
YV 2017
DETAIL YV2
TO GRADE
25x15
25CH5-04821

SP-343

SC3 PE4
ROUGHER 2 FEED BOX
332-BX-2001
332-PR-PID-2001
40BA1-03039
250KG10-03037
280-SSU-PE4-021
40BA1-03038
NOTE 7
250KG10-03036
40BA1-03035

SP-676
200BF3-03034
250x150
LSL 2015
LSH 2014
KA 2014
TYPE 3

332-PP-2002
332-SC-2002
332-ST-2002

ROUGHER 1 AND 2
3rd CONC. DIVERTER BOX 4
332-BX-9015
332-PR-PID-9002

ROUGHER 1 AND 2
3rd CONC. DIVERTER BOX 3
332-BX-9014
332-PR-PID-9002

ROUGHER 1 AND 2
3rd CONC. DIVERTER BOX 2
332-BX-9006
332-PR-PID-9002

ROUGHER 1 AND 2
3rd CONC. DIVERTER BOX 1
332-BX-9005
332-PR-PID-9002

NOTES:
1. FOR GENERAL NOTES REFER TO 000-PR-PID-0001/0002/0003/0004.
2. ALL INSTRUMENT TAGS ARE PREFIXED WITH THE AREA NUMBER SHOWN ON THIS P&ID UNLESS OTHERWISE NOTED.
3. FLOTATION CELL DART VALVES MAY BE OPERATED INDEPENDENTLY. CONTROL PROGRAMMING SHALL INCLUDE PROVISION FOR INDEPENDENT DART VALVE LEVEL CONTROL.
4. DN400 FLANGE WITH DN300 SACRIFICIAL NOZZLE.
5. PIPE TO UPCOMER.
6. LAUNDER SPRAYS SHOWN ON 332-PR-PID-9023.
7. PIPING FOR ALTERNATIVE SUMP DESTINATION.
8. TUNDISH INSTALLED ABOVE WORKING LEVEL.
9. REAGENT ADDITION TO CELL 6 VIA VENDOR SUPPLIED TUNDISH.

332-FA-2006	ROUGHER 2 CELL 6 GEARBOX FAN
332-FA-2007	ROUGHER 2 CELL 7 GEARBOX FAN
332-FA-2008	ROUGHER 2 CELL 8 GEARBOX FAN
332-FT-2006	ROUGHER 2 CELL 6
332-FT-2007	ROUGHER 2 CELL 7
332-FT-2008	ROUGHER 2 CELL 8
332-LA-2006	ROUGHER 2 CELL 5 AND 6 CONC. LAUNDER
332-LA-2007	ROUGHER 2 CELL 6 AND 7 CONC. LAUNDER
332-LA-2008	ROUGHER 2 CELL 7 AND 8 CONC. LAUNDER
332-LA-2009	ROUGHER 1 CELL 8 CONC. LAUNDER
332-PP-2001	ROUGHER 2 TAILS SAND PUMP
332-PP-2002	ROUGHER 2 SUMP PUMP
332-SC-2002	ROUGHER 2 SUMP PUMP SCREEN
332-ST-2002	ROUGHER 2 SUMP PUMP FRAME

REV	DATE	DESCRIPTION	DRN	CHK'D	DESIGN ENG.	LEAD ENG.	DESIGN APP'D	PROJ. APP'D	CLIENT APP'D
3	12MAR18	HOLD 1200 REMOVED AND 332-FT-2008 ADDED	DB	VA	MT	SB	BG	LG	
2	04AUG17	HOLD 1200 AND VALVE NUMBERS ADDED	AD	GCP	DB	SB	PF	LG	
1	24FEB17	REVISED AS NOTED (74 MTPA CASE)	CB	BT	DB	SB	BG	SM	
0	08OCT15	ISSUED FOR CONSTRUCTION	WG	GCP	DB	SB	BG	SM	

DRG No | REFERENCE DRAWINGS

DRAWN | CHECKED | DESIGN ENG. | LEAD ENG. | DESIGN APP'D | PROJ. APP'D | CLIENT APP'D

Minera Panamá

CLIENT MPSA

PROJECT MINA DE COBRE PANAMA

FIRST QUANTUM MINERALS LTD.

Lycopodium

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DRAWING TITLE
COPPER ROUGHER FLOTATION
ROUGHER 2 - SHEET 4
PIPING & INSTRUMENTATION DIAGRAM

SCALE NTS | JOB No. 1824 | DRG No. 332-PR-PID-2004 | REV. 3

DRAWN CB | DATE 04NOV13

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